



Signal Peptide

Mature

M R S L L L G T L C L L A V A L A A E V K K
ATGCGCTCTCTCCTTCTGGGCACCTTATGCCTCCTGGCTGTGGCCCTGGCAGCCGAGGTGAAGAAA
TACGCGAGAGAGGAAGACCCGTGGAATACGAGGACCGACACCGGGACCGTCCGCTCCACTTCTTT
P V E A A A P G T A E K L S S K A T T L A E
CCTGTAGAGGCCGAGCCCTGGTACTGCGGAGAAGCTGAGTTCCAAGGCGACCACACTGGCAGAG
GGACATCTCCGGCGTCGGGGACCATGACGCCTCTTCGACTCAAGGTTCCGCTGGTGTGACCGTCTC
P S T G L A F S L Y Q A M A K D Q A V E N I
CCCAGCACAGGCCTGGCCTTACAGCCTGTATCAGGCAATGGCCAAGGACCAGGCAGTGGAGAACATC
GGTTCGTGTCCGGACCGGAAGTCGGACATAGTCCGTTACCGGTTCTGGTCCGTCACCTCTTGTAG
L V S P V V V A S S L G L V S L G K A T T
CTGGTGTACCCGCTGGTGGTGGCCTCGTCGTTGGGTCCTGTCGTCGCTGGGCGGCAAGGCGACCAG
GACCACAGTGGGCAACCACCGGAGCAGCGACCCAGAGCACAGCGACCCGCCGTTCCGCTGGTGC
A S Q A K A V L S A E Q L R D E E V H A G L
GCGTCGAGGCCAAGGCAGTGTGAGCGCCGAGCAGCTGCGCGACGAGGAGGTGCACGCCGGCCTG
CGCAGCGTCCGGTCCGTCACGACTCGCGGCTCGTCGACGCGCTGCTCCTCCACGTGCGGCCGGAC
G E L L R S L S N S T A R N V T W K L G S R
GGTGAGCTGTGCGCTCACTCAGCAACTCGACGGCGCGCAACGTGACCTGGAAGCTGGGCAGCCGA
CCACTCGACGACGCGAGTGAGTCGTTGAGCTGCCGCGCGTTGCACTGGACCTTCGACCCGTCGGCT
L Y G P S S V S F A D D F V R S S K Q H Y N
CTGTACGGACCCAGCTCAGTGAGCTTCGCTGATGACTTCGTGCGCAGCAGCAAGCAGCACTACAAC
GACATGCCTGGGTGAGTCACTCGAAGCGACTACTGAAGCACGCGTCGTCGTTCCGTCGATGTTG
C E H S K I N F P D K R S A L Q S I N E W A
TGCGAGCACTCCAAGATCAACTTCCCGGACAAGCGCAGCGCGCTGCAGTCCATCAACGAGTGGGCC
ACGCTCGTGAGGTTCTAGTTGAAGGGCCTGTTGCGCTCGCGCGACGTCAGGTAGTTGCTCACCCGG
A Q T T D G K L P E V T K D V E R T D G A L
GCGCAGACCACCGACGGCAAGCTGCCCCGAGGTCACCAAGGACGTGGAGCGCACGGACGGCGCCCTG
CGCGTCTGGTGGCTGCCGTTTCGACGGGCTCCAGTGTTTCTGACCTCGCGTGCCTGCCGCGGGAC
L V N A M F F K P H W D E K F H H K M V D N
CTAGTCAACGCCATGTTCTTCAAGCCACACTGGGATGAGAAATCCACCACAAGATGGTGGACAAC
GATCAGTTGCGGTACAAGAAGTTCGGTGTGACCCTACTCTTTAAGGTGGTGTCTACACCTGTTG
R G F M V T R S Y T V G V T M M H R T G L Y
CGTGGCTTCATGGTGA CTGCGTCTATACTGTGGGTGTTACGATGATGCACCGGACAGGCCTCTAC
GCACCGAAGTACCACTGAGCCAGGATATGACACCCACAATGCTACTACGTGGCCTGTCCGGAGATG
N Y Y D D E K E K L Q L V E M P L A H K L S
AACTACTACGACGACGAGAAGGAGAAGCTGCAGCTGGTGGAGATGCCCCCTGGCTCACAAGCTCTCC
TTGATGATGCTGCTGCTCTTCTCTTCGACGTCGACCACCTCTACGGGGACCGAGTGTTTCGAGAGG
S L I I L M P H H V E P L E R L E K L L T K
AGCCTCATCATCCTCATGCCCCATCACGTGGAGCCTCTCGAGCGCCTTGAAAAGCTGTACCAAAA
TCGGAGTAGTAGGAGTACGGGGTAGTGACCCCTCGAGAGCTCGCGGAACCTTTTCGACGATTGGTTT
E Q L K I W M G K M Q K K A V A I S L P K G
GAGCAGCTGAAGATCTGGATGGGGAAGATGCAGAAGAAGGCTGTTGCCATCTCCTTGCCCAAGGGT
CTCGTCGACTTCTAGACCTACCCCTTCTACGTCTTCTTCCGACAACGGTAGAGGAACGGGTTCCCA
V V E V T H D L Q K H L A G L G L T E A I D
GTGGTGGAGGTGACCCATGACCTGCAGAAACACCTGGCTGGGCTGGGCCTGACTGAGGCCATTGAC
CACCACCTCCACTGGGTACTGGACGTCTTTGTGGACCGACCCGACCCGGA CTGACTCCGGTAAC TG
K N K A D L S R M S G K K D L Y L A S V F H
AAGAACAAGGCCGACTTATCACGCATGTCTGGCAAGAAGGATCTGTACCTGGCCAGTGTGTTCCAC
TTCTTGTTCCGGCTGAATAGTGCCTACAGACCGTTCTTCTTAGACATGGACCGGTACACACAAGGTG
A T A F E L D T D G N P F D Q D I Y G R A E E
GCCACCGCCTTTGAGTTGGACACAGATGGCAACCCCTTTGACCAGGACATCTACGGGGCGGAGGAG
CGGTGGCGGAAACTCAACCTGTGTCTACCGTTGGGGAAACTGGTCCTGTAGATGCCCGCGCTCCTC
L R S P K L F Y A D H P F I F L V R D T Q S
CTGCGCAGCCCCAAGCTGTTCTACGCCGACACCCCTTCATCTTCTGGTGGGGACACCCAAAGC
GACGCGTCGGGGTTCGACAAGATGCGGCTGGTGGGGAAGTAGAAGGACCACGCCCTGTGGGTTTCG
G S L L F I G R L V R L K G D K M R D E L •
GGCTCCCTGCTATTTCATTGGGCGCCTGGTCCGGCTCAAGGGTGACAAGATGCGAGACGAGTTATAG
CCGAGGGACGATAAGTAACCCGCGGACAGGCCGAGTTCCCACTGTTCTACGCTCTGCTCAATATC

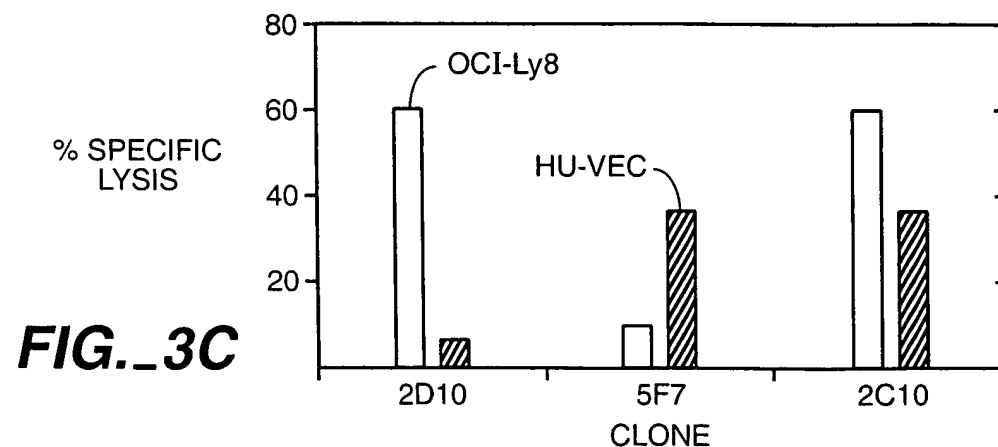
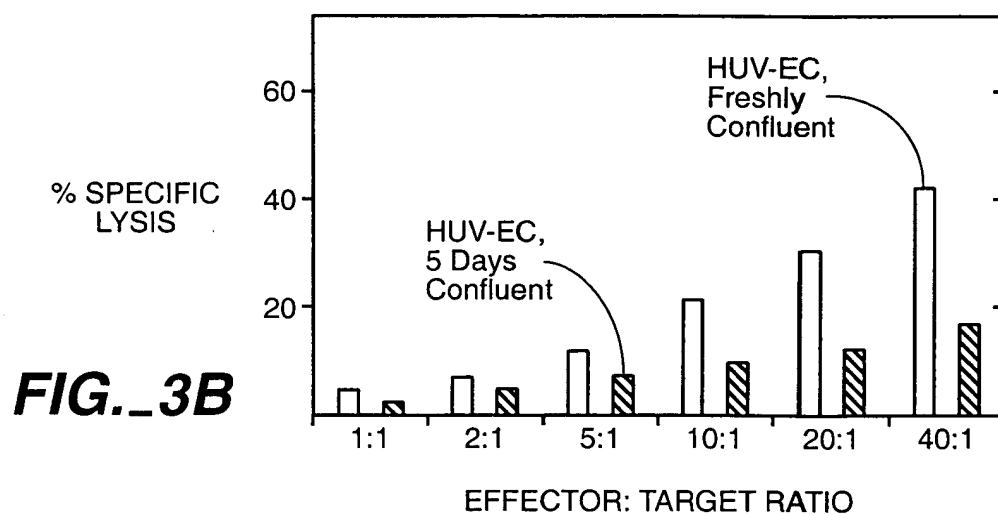
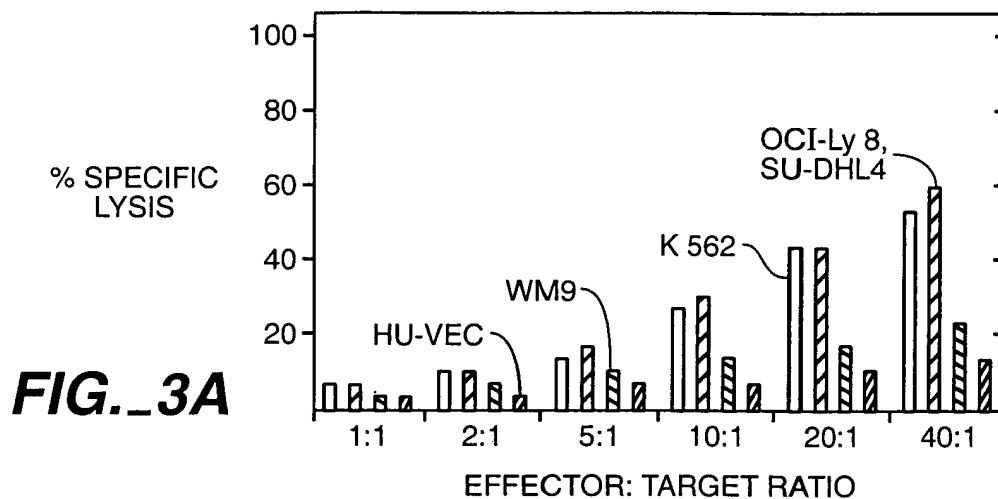
FIG._1

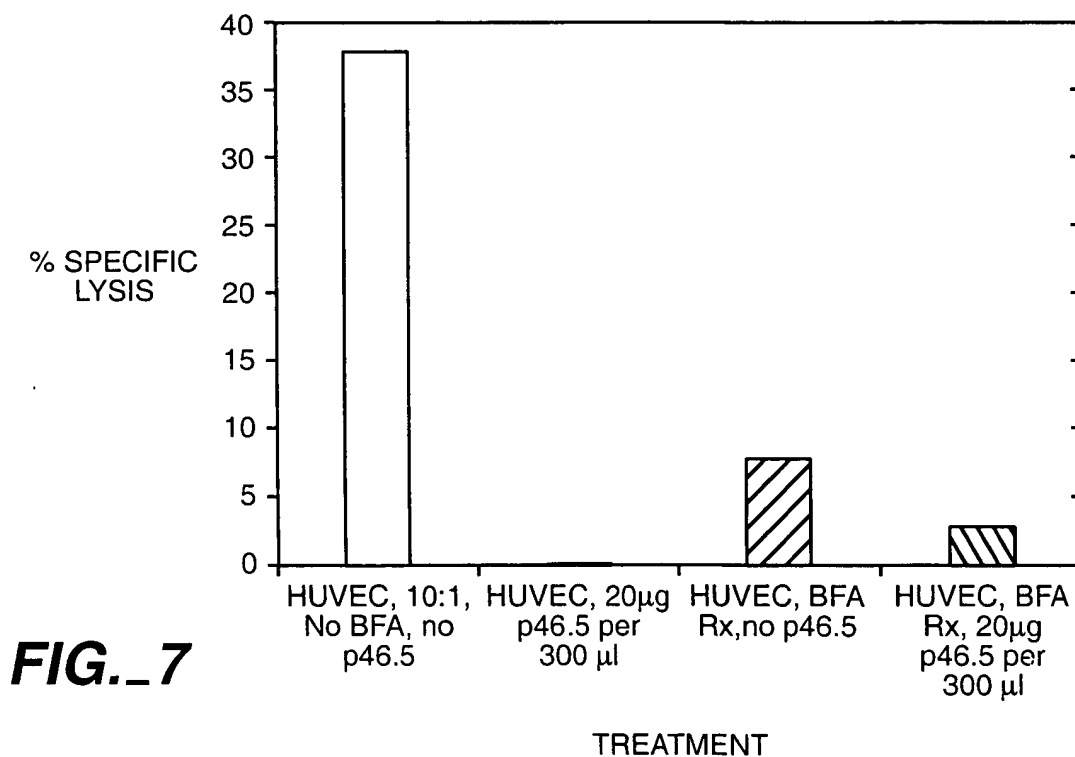
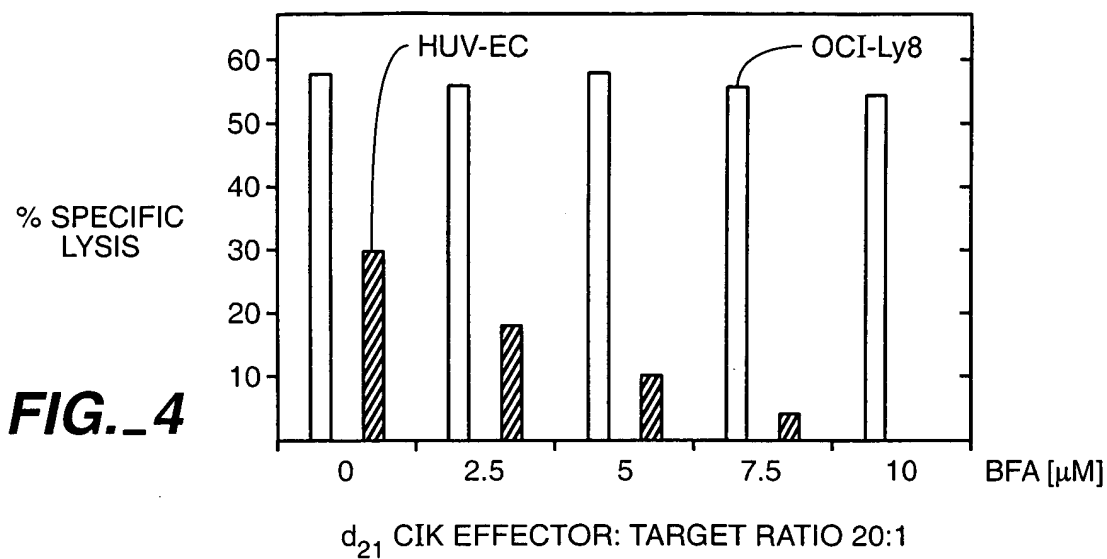


Alignment of HSO47 with HLA/IL-12 β Chains

<u>Molecule</u>	<u>Position</u>	<u>Amino Acid Sequence</u>	<u>Position</u>
Human Hsp47	96	AvlsAEQLR	104
Hu Colligin 2	95	AVLSAEQLR	103
HLA-A2 A*0201	149	AahvAEQLR	157
HLA-A2 A*0204	167	AahvAEQLR	175
HLA-A2 A*0206	175	AahvAEQLR	183
HLA-A2 A*0211	166	AahvAEQLR	174
HLA-A10 alpha	84	AahvAEQLR	92
HLA-Aw 69	150	AahvAEQLR	158
Rat Hsp47	94	AVLSAEkLR	102
Mouse Hsp47	94	AVLSAEkLR	102
Hamster Hsp47	94	AVLSAEkLR	102
Chicken Hsp47	82	AVLSAdkLn	90
Hu IL-12 β -chain	150	AtLSAErvR	158
mouseIL1 2 β -chain	150	AtLSAErvR	158
cat IL-12 β -chain	150	AtLSAEkvR	158
cow IL12 β -chain	150	AlLSAEkvn	158
Consensus HSP		AVLSA(d,e)(k,q)LR	
Consensus HLA		A(v,a)(l,h)(a,v)AEQLR	
Consensus IL-12 β -chain		A(v,l,t)LSAE(q,k,r)(l,v)R	
Overall Consensus		A(v,l,a,t)(l,h)(a,v)A(d,e)(k,q,r)(l,v)R	

FIG._2







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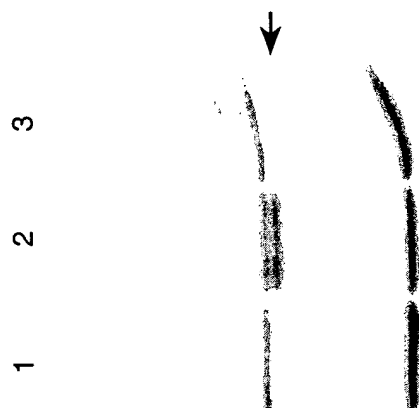


FIG._5C

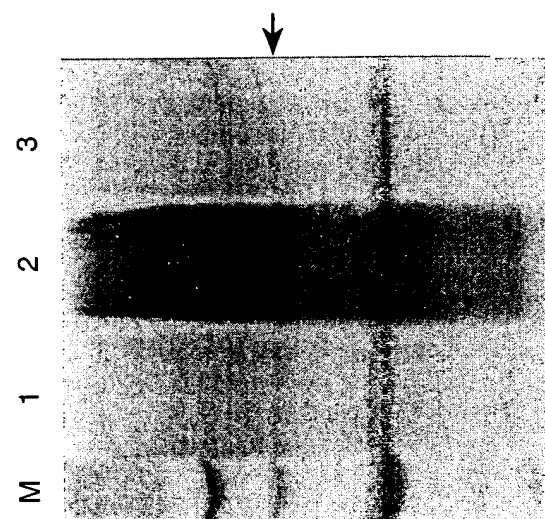


FIG._5B

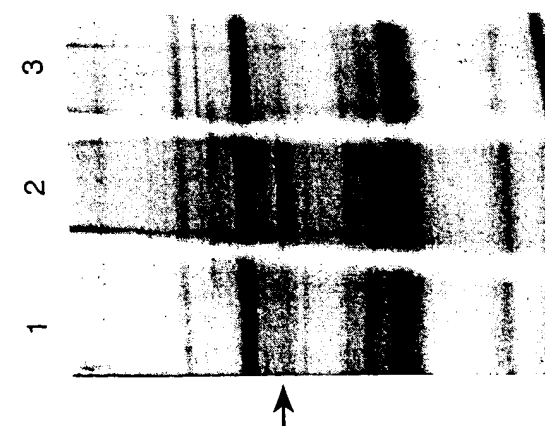


FIG._5A



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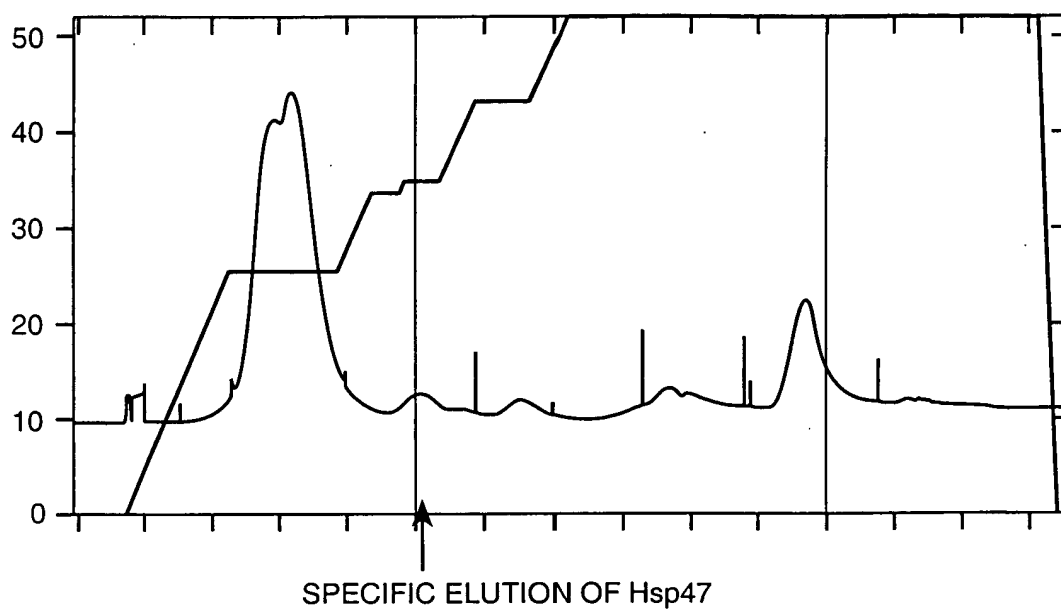


FIG._6A

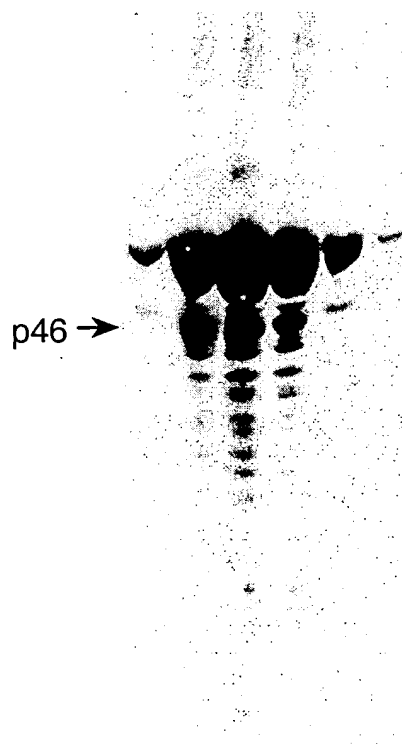
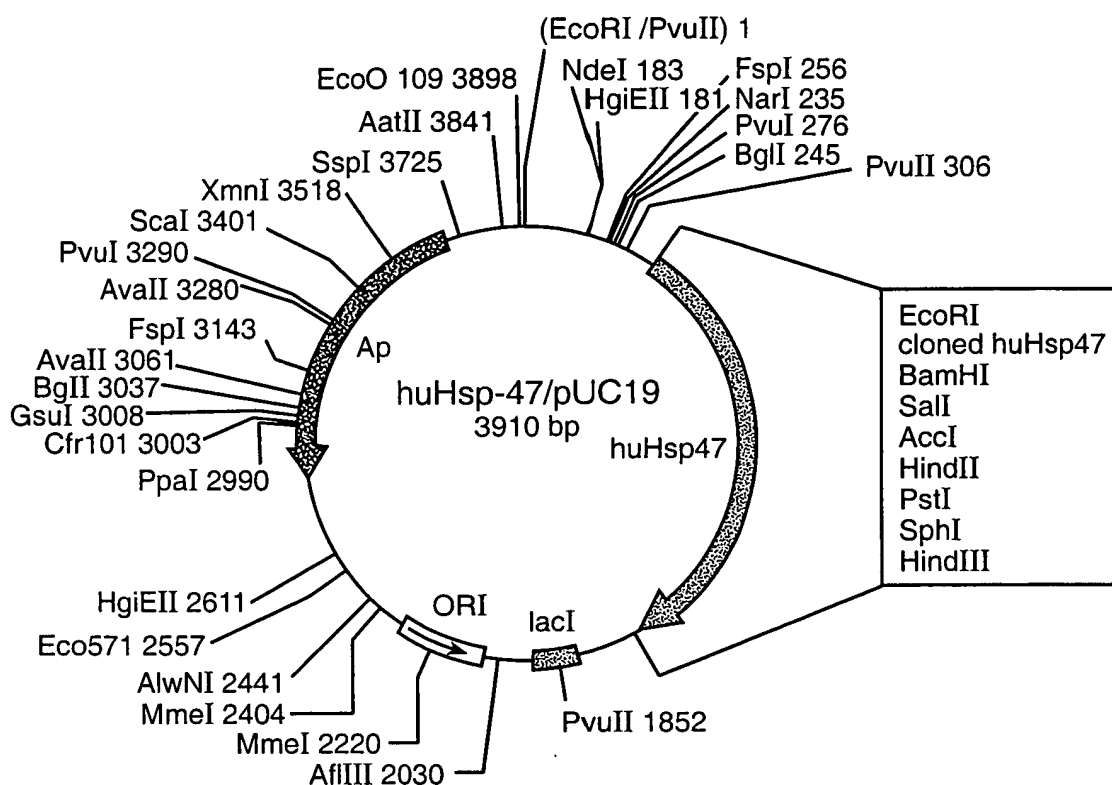
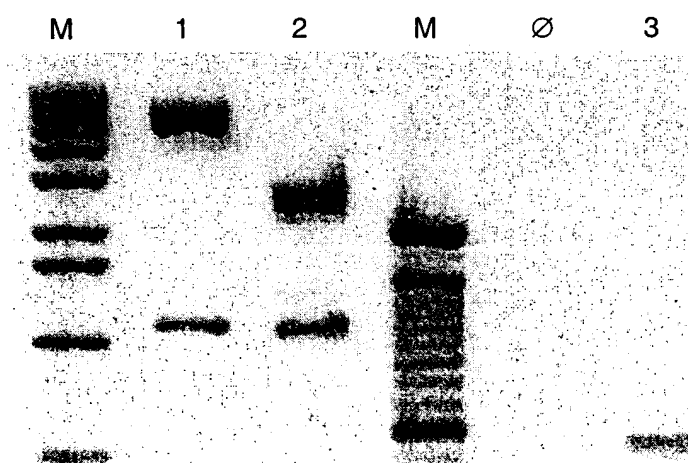


FIG._6B

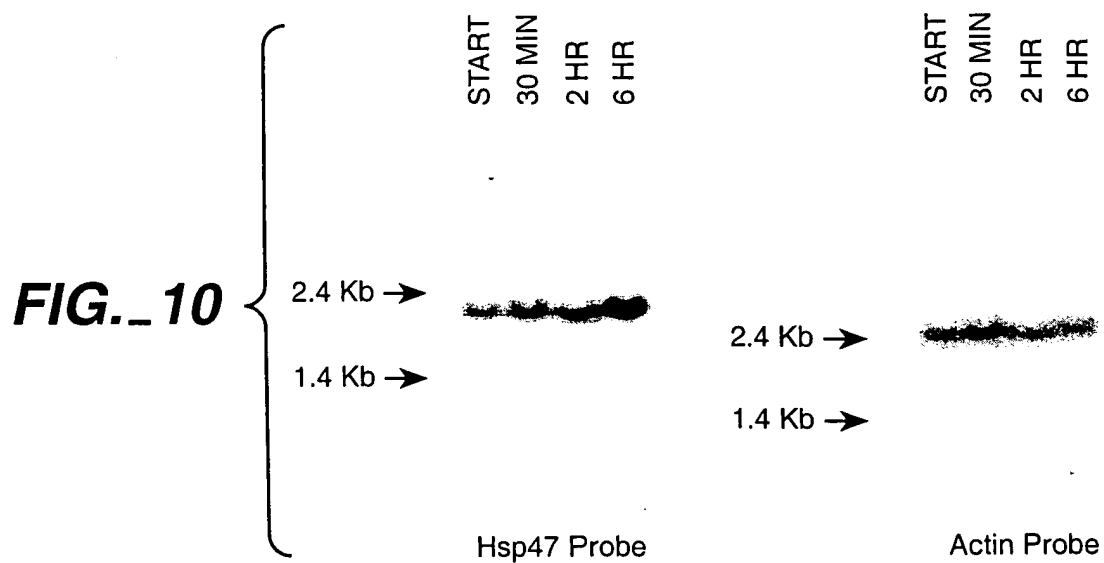
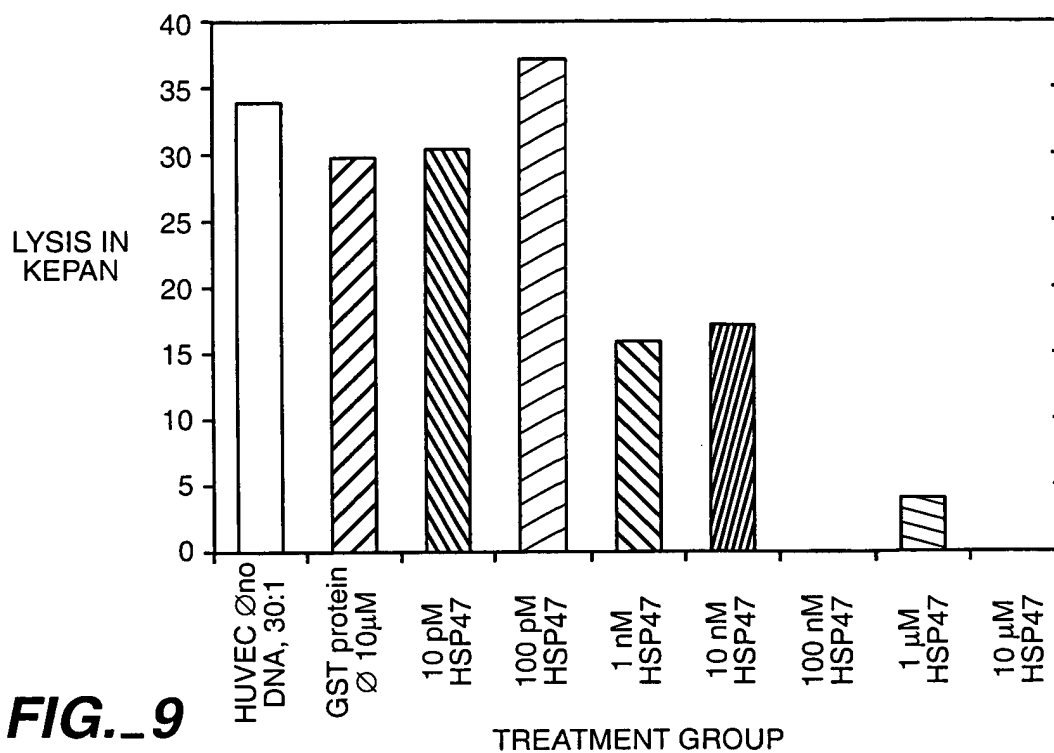


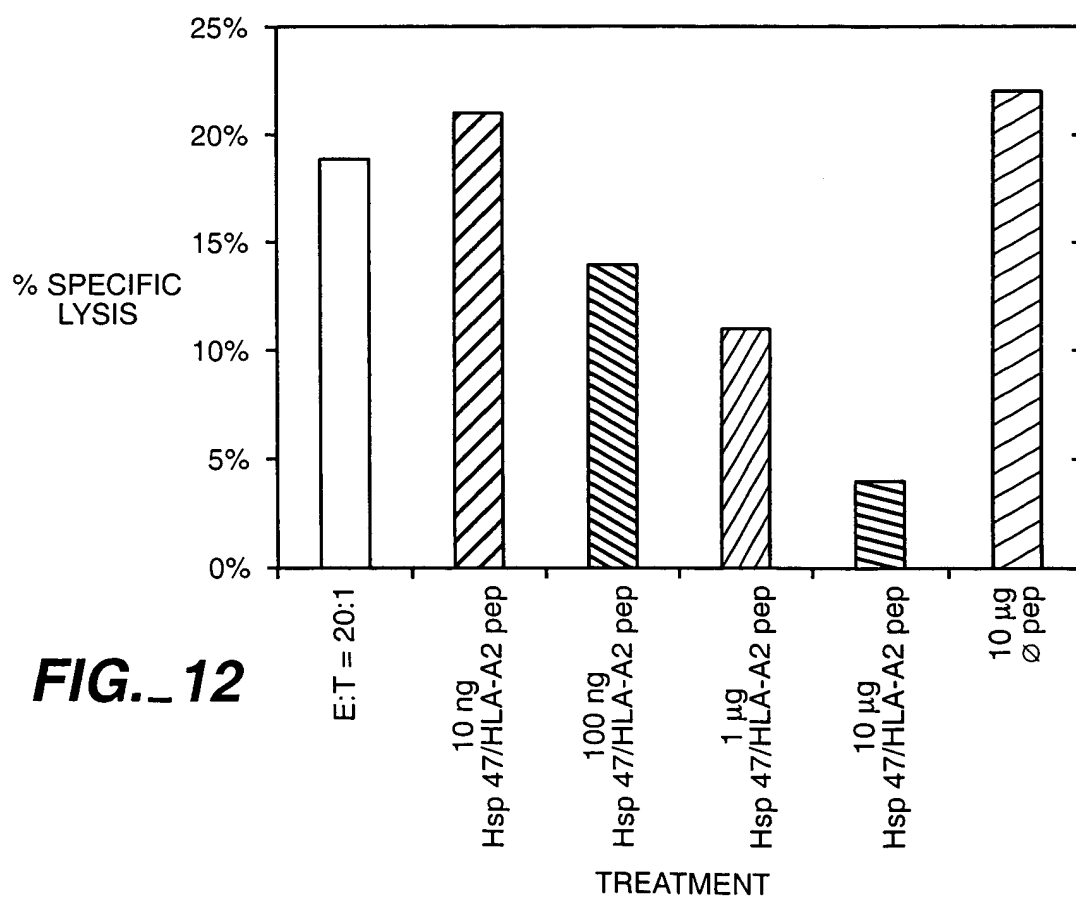
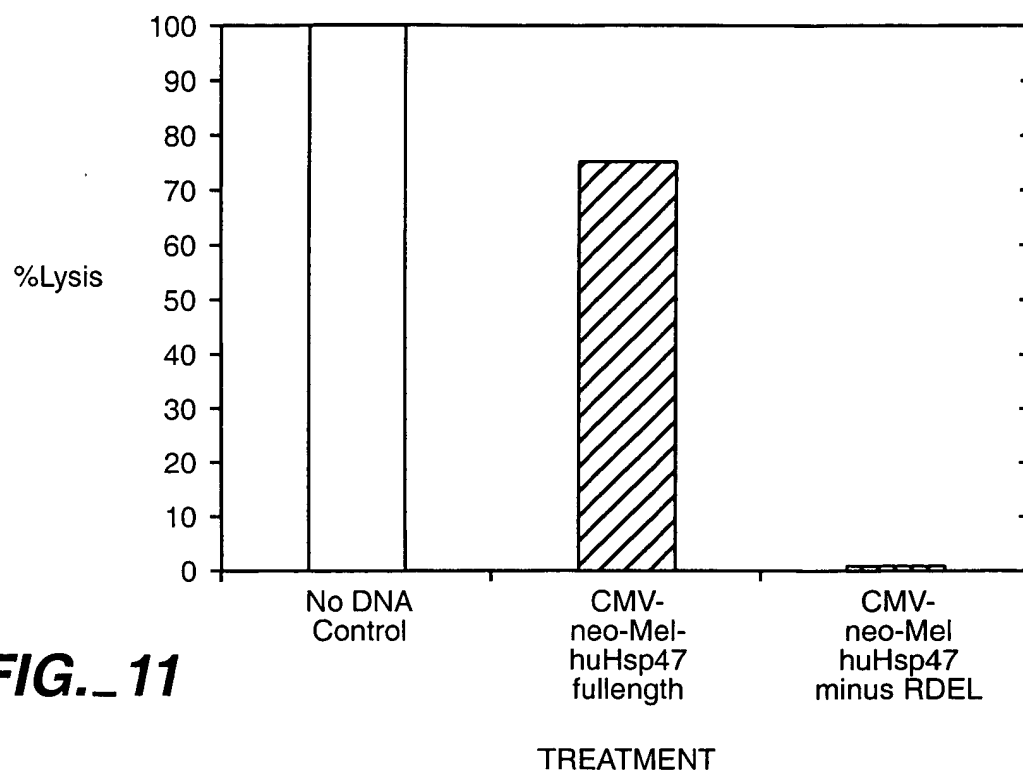
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**FIG._8A****Plasmid name:** huHsp47/pUC19**Plasmid size:** 3910 bp**Constructed by:** Ernest-G. Hope**Construction date:** 1996

Comments/References: puc 19 based huHsp47 gene cassette derived from 2 partial clones in pCR1000/pGEM via primers (A. 5' -ACGTTTGGATCCAGGTGAAGA, 3' -GTCCTTGGCCAT B. 5' GCAATGGCCAAGGACCAGGCAGTGGAG, 3' ATCTGAATTCCTATAACTCGTCTCGCA)

FIG._8B







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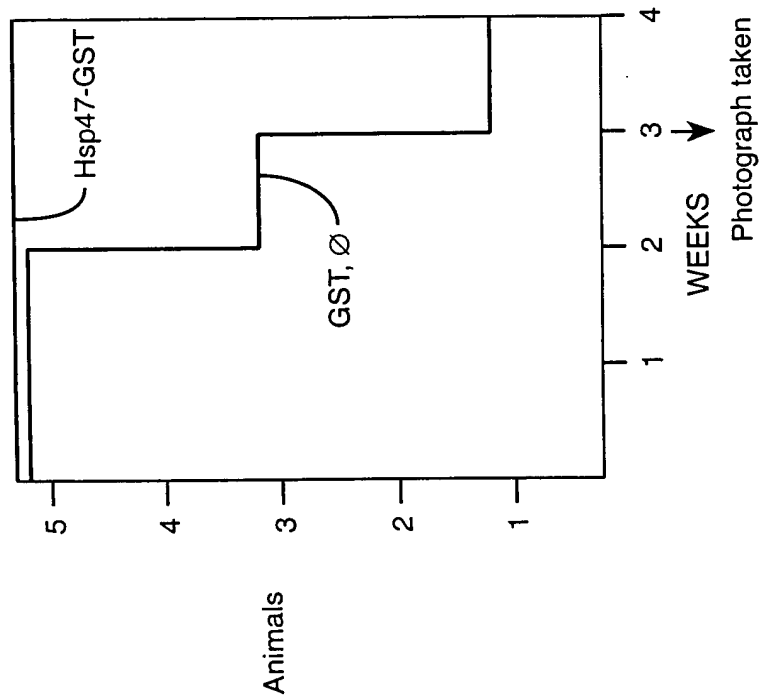
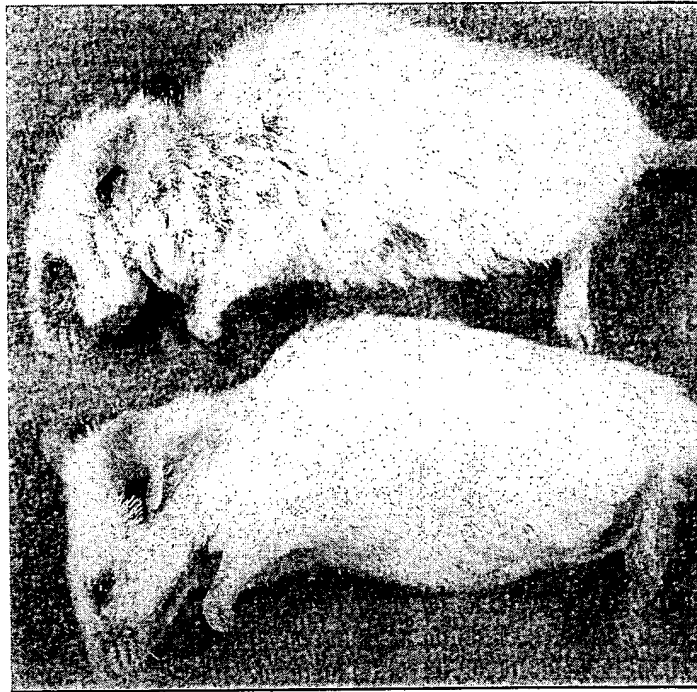


FIG. 13



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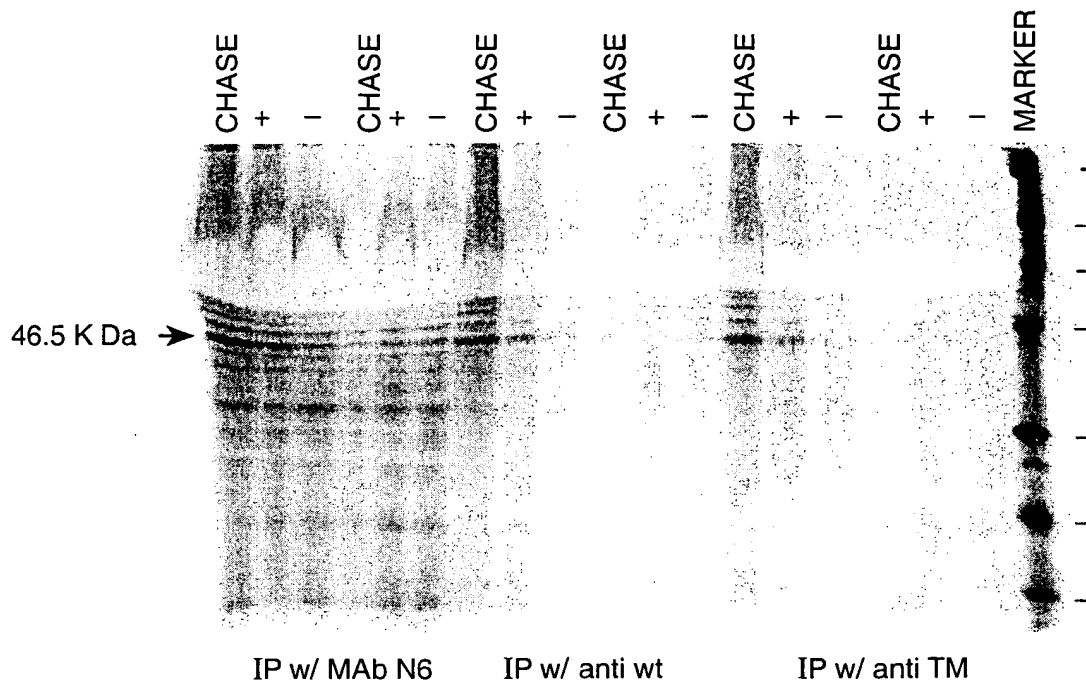


FIG._14A

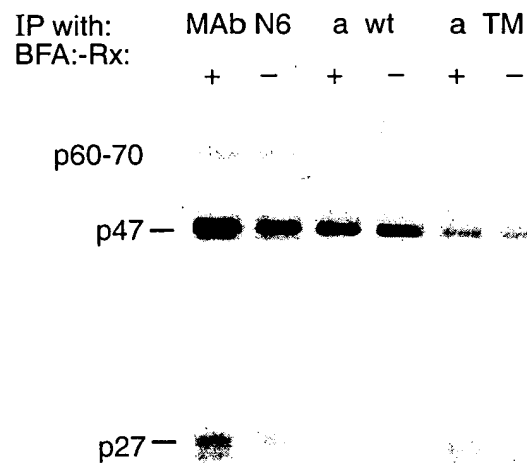


FIG._14B

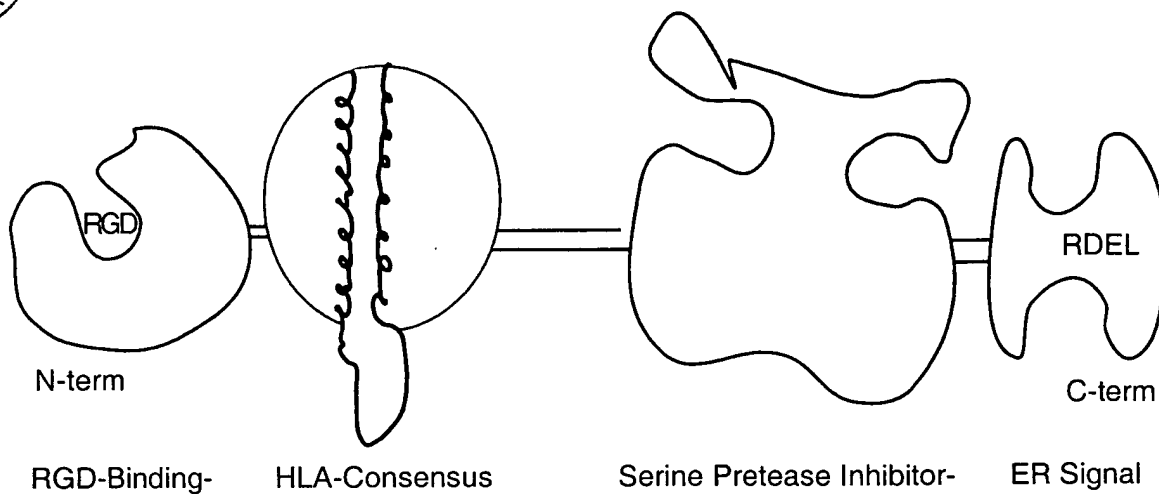


FIG._15A

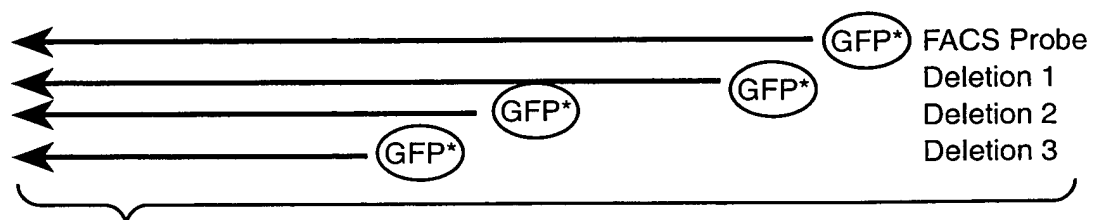


FIG._15B

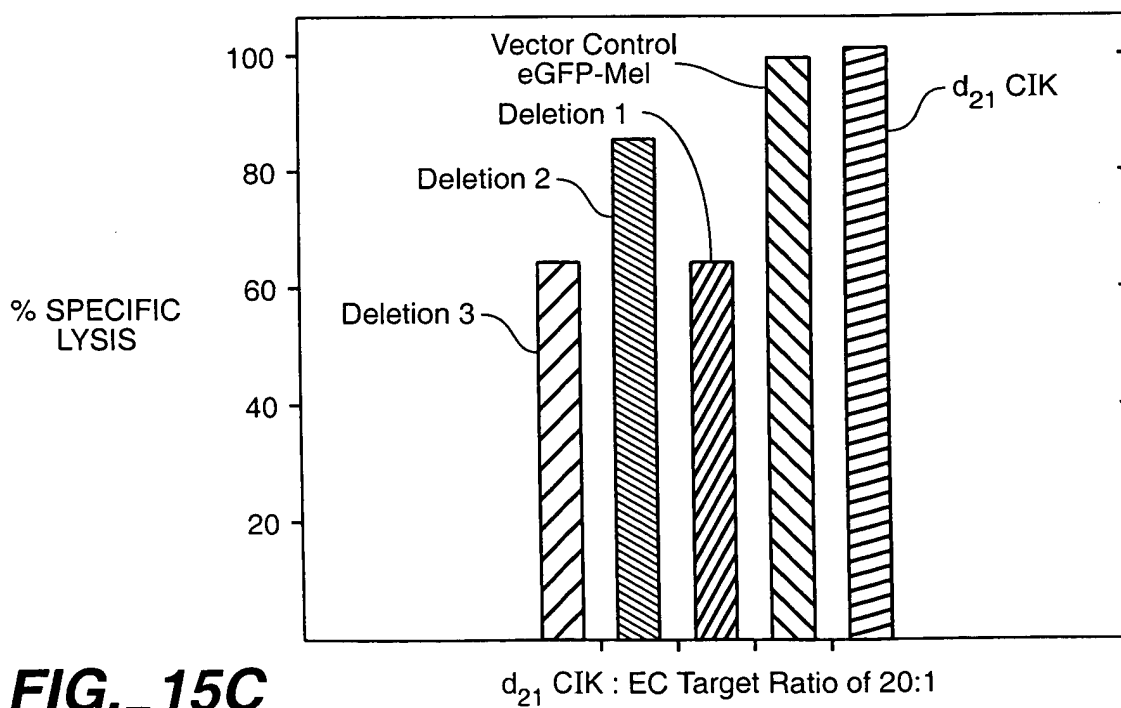


FIG._15C